

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SUPPLEMENTAL SPECIFICATION

Section 632—Portable Changeable Message Signs

Delete Subsection 632.3 and substitute the following:

632.3 Construction Requirements

632.3.01 Personnel

General Provisions 101 through 150.

632.3.02 Equipment

Use Portable Changeable Message Sign (PCMS) meeting the requirements of MUTCD, Section 6F.55 Portable Changeable Message Signs and the following:

- A. Completed a full evaluation cycle (1-year) by National Transportation Product Evaluation Program (NTPEP).
- B. Passed NTPEP durability test.
- C. Has a control system with a keyboard to allow programming of user defined messages.
- D. Have primary and backup power sources.
- E. Capable of adjusting its brightness from daylight to night time conditions.
- F. Capable of displaying 3 lines of legend.
- G. Has a minimum reliability from its primary power supply for a minimum of 14 days for solar units (5 days for diesel units). Gasoline powered units not allowed.
- H. Message displayed on the sign is visible for 3000 feet (915 m) and legible for not less than 650 ft (198 m) during both daytime and nighttime operation.
- I. Is a self-contained unit including a control system with keyboard, primary and backup power source, mounting and transporting equipment (trailer mounted with all applicable lights and hardware).
- J. Bottom of message sign panel is capable of being raised a minimum of 7 feet above the roadway.
- K. Listed on [QPL 82](#) as maintained by the Office of Materials and Research or have a letter of approval from the Office of Materials and Research before the sign is used on any portion of the worksite.
- L. PCMS that remain the property of the Contractor may be either new or used provided the PCMS meets the requirements of this Subsection.
- M. In addition to the alphanumeric combinations, the signs should include the capability to display directional arrow messages. A PCMS may be used as an arrow board display panel provided the PCMS meets the size and display requirement of a Type C panel as defined by the MUTCD, Section 6F.55 Portable Changeable Message Signs.
- N. The PCMS has the following programmed as permanent messages:
 - 1) /KEEP/RIGHT/ /
 - 2) /KEEP/LEFT/ /
 - 3) /TWO WAY/ TRAFFIC/AHEAD/

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- 4) /ONE LANE/BRIDGE/AHEAD/
- 5) /MERGING/TRAFFIC/AHEAD/
- 6) /HEAVY/TRAFFIC/AHEAD/
- 7) /BUMP/AHEAD/ /
- 8) /PAINT/CREW/AHEAD/
- 9) /LOOSE/GRAVEL/AHEAD/
- 10) /SURVEY/PARTY/AHEAD/
- 11) /ICY/BRIDGE/AHEAD/
- 12) /ROUGH/ROAD/AHEAD/
- 13) /DO/NOT/PASS/
- 14) /LOW/SOFT/SHOULDER/ /
- 15) /SHOULDER/DROPOFF/ /
- 16) VEHICLES/CROSSING/ROADWAY/
- 17) /DETOUR/AHEAD/ /
- 18) /MERGE/RIGHT/AHEAD/
- 19) /MERGE/LEFT/AHEAD/
- 20) /TRAFFIC/ACCIDENT/AHEAD/
- 21) /TRAFFIC/SLOWS/AHEAD/
- 22) /ROAD/NARROWS/AHEAD/
- 23) /LEFT/LANE/NARROWS/
- 24) /RIGHT/LANE/NARROWS/
- 25) /LANE/NARROWS/AHEAD/
- 26) /LEFT/LANE/ /
- 27) /RIGHT/LANE/ /
- 28) /LEFT/SHOULDER/ /
- 29) /RIGHT/SHOULDER/ /
- 30) /CLOSED/AHEAD/ /

- O. The PCMS is entirely mounted on a trailer that meets all of the requirements of the Georgia Vehicle Code. Additional trailer requirements:
1. The trailer and the components of the sign is designed to allow one person to perform all transporting and operating functions without assistance.
 2. The trailer is designed for unlimited on-highway travel at 70 mph (110 kph).
 3. The trailer has a minimum of four outrigger type leveling jacks, one at each corner of the trailer deck.
 4. The jacks are mounted to allow them to swivel into a locked position for secure storage during travel.
 5. The trailer and all mounted equipment are structurally adequate for unlimited normal operation in wind velocities up to 80 mph (130 kph).

632.3.03 Preparation

General Provisions 101 through 150.

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632.3.04 Fabrication

General Provisions 101 through 150.

632.3.05 Construction

A. Utilization Requirements

1. When set up as a Pay Item in the Contract, utilize PCMS whenever any condition(s) exists that would require extra emphasis in warning motorists of a situation or at any location as directed by the Engineer. Furnish PCMS and have them available on a continuous basis.
2. Use PCMS on Interstate, limited access and multi-lane divided highways when any of these conditions exist:
 - a. Workers or equipment operating within 2 ft. (600 mm) of a travel lane without appropriate traffic control devices for positive barrier protection.
 - b. Excavation or other construction creates drop-offs adjacent to the edge of a travel lane and channelization devices are placed within the travel lane that is adjacent to the drop-off.
 - c. Material hauling in or out of a travel lane by hauling vehicles requires traffic to slow in the temporary traffic control zone.
 - d. Traffic is delayed by pacing all lanes for short periods of time for placing bridge beams, overhead sign structures, blasting, etc.
 - e. Any time that divided highway traffic is required to operate as two-way traffic condition and traffic is not separated by a positive barrier system.
 - f. One mile in advance of lane closure, place PCMS on outside shoulder denoting appropriate lane closure one mile ahead.
3. Use PCMS on all other types of roadways according to the traffic control plan or as directed by the Engineer.
4. Locate the PCMS near the construction activity and display a message that is both concise and meaningful. Obtain the Engineer's approval for messages used on the PCMS.
5. Include the location of the PCMS and any message to be displayed on the PCMS in the approved traffic control plan required in [Section 150-Traffic Control](#).
6. For emergency situations, PCMS that are smaller in size and do not have all of the capabilities outlined in this Specification, may be used until a PCMS that meets these requirements can be located and placed in operation at the site.

The Engineer will determine when conditions and situations are to be considered emergencies and will regulate the length of time that non-specification PCMS may be used.

Provide the Engineer written notification when non-specification PCMS signs are in use on the work.

B. PCMS Phase Messages

1. Messages are displayed in preferably one phase but no more than two phases.
2. The first phase directs the motorist to take a specific action, such as MERGE/RIGHT, KEEP/RIGHT, OR REDUCE / SPEED.
3. The second phase, if necessary, is used to inform the motorist of road conditions such as LEFT/LANE/CLOSED; LANE/NARROWS/AHEAD; WATER/IN/ROAD; SHOULDER/DROP OFF; TRUCKS/IN AND/OUT.
4. Do not use messages such as USE/CAUTION; HAZARD/AHEAD; or DANGER which are confusing and give no guidance to the motorist. Also, do not use messages such as BUCKLE/UP or DRIVE/SAFELY which diminish the impact of important and relevant messages.

632.3.06 Quality Acceptance

General Provisions 101 through 150.

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632.3.07 Contractor Warranty and Maintenance

Keep the units in good repair and neat and clean in appearance. If the unit fails, malfunctions, or is damaged, immediately repair the unit and furnish flaggers or other approved means to safely control the traffic until the units are back in service. Make repairs or replace the unit within 24 hours. Maintenance also includes periodically cleaning the units.

Office of Materials & Research